

ANDREW CHU

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EDUCATION

University of Waterloo

Bachelor of Computer Science (Honours)

Apr. 2028

Waterloo, ON

TECHNICAL SKILLS

Languages: TypeScript, Python, C/C++, Java, JavaScript, Go, C#, CSS, HTML, Bash

Frameworks: Next, React, Express, Flask, Redis, Jest, SvelteKit, Electron, LangChain, MySQL, MongoDB, Supabase

Developer Tools: Azure, PyTorch, Pandas, Linux, Git, Figma, Docker, Postman, GCP, Nginx, Node.js

EXPERIENCE

Software Engineer Intern

Sep. 2025 - Dec. 2025

Alljoined

San Francisco, CA

- Developed unified infrastructure for processing EEG data, saving research and ML teams **30+ hours/week**
- Migrated **2+ million** EEG data trials from live production database to custom lakehouse with **0%** downtime
- Automated internal data labeling system scoring **98%** real-world accuracy, saving **300+** hours of manual work
- Productionized EEG decoding research model, reducing fine-tuning time by **87%** and improving accuracy by **12%**

Software Engineer Intern

May 2025 - Aug. 2025

CGI

Markham, ON

- Developed multimodal RAG system to retrieve information from **500+** internal production guides, accelerating team incident response times by **17%**
- Increased retrieval and response accuracy by **38%** through PEFT fine-tuning a Llama3 model with QLoRA
- Automated health checks, server restarts, and email notifications, by engineering unified dashboard for remotely executing jobs on **400+** applications and servers with Ansible

Technical Lead (Part Time)

May 2025 - Aug. 2025

UW Data Science Club

Waterloo, ON

- Spearheaded user check-in and application portal projects written in Next.js and Express with **1000+** users
- Resolved **15+** development tickets spanning frontend UI enhancements, data caching, and database migration
- Implemented email confirmation for password resets and user portal, improving user experience and security

Data Engineer Intern

Aug. 2024 - Sep. 2024

Alljoined

Toronto, ON

- Debugged critical timing issue in data preprocessing by implementing data observability system in Python
- Reduced latency in data collection by **95%** by refactoring WebSocket I/O to prevent deadlocking
- Designed signal processing pipeline for denoising and artifact correction using NumPy, Pandas, and scikit-learn

Full-Stack Developer

Sep. 2022 - Jan. 2023

Digitera Interactive

Ottawa, ON

- Developed "Skule News" project, a mobile school news app to streamline student communication written in Flutter
- Integrated Firebase for authentication, real-time updates, and cloud file storage for secure backend support
- Reduced frequency of in-app crashes by **20%** by resolving **6+** bugs resulting from incorrect Firebase queries

PROJECTS

Replate - Sustainable Delivery App (GenAI Genesis Winner) | Next, Express, MongoDB, Flask, Cohere, Gemini, Twilio

- Achieved **AI Eco-Mobility Award** at GenAI Genesis, Canada's largest AI hackathon, among **600+** competitors
- Engineered a meal recommendation system feeding *Too Good To Go*'s API into an evaluator-optimizer workflow
- Utilized Express and Flask backend microservices to process orders and serve live delivery updates via Twilio SMS

EasyMeet - Meetup Scheduling Website | React, Firebase, Jest, GitHub, CI/CD, Figma

- Developed and deployed a mobile-first, passwordless meetup scheduling website using React for **100+ users**
- Automated **CI/CD** unit testing and deployment with build caching using **Jest** and **GitHub Actions**

chat.andrewchu.ca - Personal AI Assistant | Transformers, Nginx, PyTorch, mlx-lm, Docker, PostgreSQL, Next, FastAPI

- Built a personal AI chatbot fine-tuned using mlx-lm library using QLoRA, deployed on a Raspberry Pi
- Cut inference times by **67%** by embedding user queries and LLM responses with edge-optimized ColBERT model